REMARKS

Claims 1, 4-11, 14-19, 22-27 and 29-35 presently appear in this case. No claims have been allowed. The official action of January 28, 2004, has now been carefully studied. Reconsideration and allowance are hereby respectfully urged.

Briefly, the present invention is based on the finding that HBsAg particles containing an antigenic molecule (claim 1) and optionally an immunostimulating molecule (claim 8) will modulate or stimulate a CTL response, which in the absence of these molecules, would not have been modulated or stimulated. It is shown in the present application that priming of a CTL response is independent from other immune response mechanisms, such as antibody production. Thus, administration of the composition of the present invention results in a CTL response, without antibodies or at least not a significant level of antibodies present.

The interview among Examiner Wehbe and applicants' attorneys Roger Browdy and Allen Yun, conducted on April 23, 2004, is hereby gratefully acknowledged. In this interview, proposed amendments to claim 1 were discussed in view of 35 U.S.C. § 112, first paragraph, and 35 U.S.C. § 102 rejections. The arguments presented at the interview with respect to the 35 U.S.C. § 112, first paragraph, rejection are as presented herein with respect to that rejection. While no agreement was reached

with respect to the 35 U.S.C. § 112 rejection, the examiner stated that she would seriously consider our arguments, although the examiner indicated that amendments after final rejection might not be entered if new issues were raised that required new consideration.

As to the art rejection over Neurath, applicant argued that anticipation was avoided by the proposed amendment to the claims specifying that the composition was being administered to patients in need of CTL response stimulation. The examiner stated that she would have to expand her search in order to find out whether other art exists that would suggest that covalently bonded antigen in HbsAg would a stimulate a CTL response, in which case it would be obvious to combine the references. This argument need no longer be relied upon by applicant, as the claims have now been amended so that each are now directed only to subject matter that the examiner has previously indicated as being free of any prior art rejection.

In the final rejection of January 28, 2004, claims 1, 3-11, and 13-35 were rejected under 35 U.S.C. § 112, first paragraph, for lack of enablement. The examiner states that the ability to generate CTL *in vivo* is significantly affected by the antigen and route of administration, and that genetics, dose or concentration of antigen and route of antigen administration contribute to the unpredictability of generating CTL, helper T

cell, and/or B cell responses *in vivo*. The examiner states that the claims still read on use of numerous routes of delivery, including intravenous, intraperitoneal, subcutaneous, and intramuscular, and that the experiments do not disclose or provide guidance as to the route of administration. Thus, the examiner states that the specification fails to provide sufficient guidance to overcome the unpredictability associated with various routes of delivery of antigen in the generation of immune responses. This rejection is respectfully traversed.

In an attempt to obviate this issue, the claims have been amended by specifying that the injection is "in a manner so as to elicit a CTL response." It is noted that in the official action of May 6, 2003, in discussing this same rejection at the bottom of page 3, the examiner suggested that amendment of the claims to include the language "by an effective route" would be acceptable to obviate the rejection, provided that the applicant can point to support in the specification for this language. If "by an effective route" avoids the rejections, so too should "in a manner so as to elicit a CTL response". This, too, functionally defines the effective route.

As to support in the specification, there is no support using the exact same language. However, those of ordinary skill in the art know how to elicit a CTL response. It is very clear from reading the specification as a whole that a purpose of the

invention is to elicit a CTL response. For example, in the "background" section at page 2, lines 19-22, the specification states that it is well known that for maximum effectiveness, a vaccine should also be able to elicit a CTL response. The following paragraph in the background of the invention discloses that it is known that mode of processing and presentation of an antigen determines whether a humoral or CTL response is activated. See also the last sentence on page 2. At page 3, lines 4-8, the specification states that the compositions of the present invention are effective to produce a CTL response, even when the antigenic molecule is substantially ineffective in producing such a response. Furthermore, the experiment in section B1 at page 8 of the specification shows that the compositions of the present invention elicited a CTL response. At page 11, line 21, of the specification it is stated that the composition "may be administered to induce a CTL response".

Thus, it is clear from a reading of the specification as a whole that the inventors were in possession of the concept of administering in a manner so as to elicit a CTL response. This is sufficient to satisfy the written description requirement of 35 U.S.C. § 112, first paragraph. It is believed that the examiner has already taken the position on the record, as indicated above, that language such as "in an effective amount" would satisfy the enablement requirement of 35 U.S.C. § 112,

first paragraph, as long as it did not run afoul of the written description requirement. For the reasons above, the claims as presently amended satisfy all requirements of the first paragraph of 35 U.S.C. § 112, and applicant should not be denied a patent on an important invention simply because certain magic words do not appear in the specification. Note MPEP § 2163 II 3.(a), where it states:

> What is conventional or well known to one of ordinary skill in the art need not be disclosed in detail. See *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, [802 F.2d 1367, 1384, 231 USPQ 81, 94 (Fed.Cir., 1986)]. If a skilled artisan would have understood the inventor to be in possession of the claimed invention at the time of filing, even if every nuance of the claims is not explicitly described in the specification, then the adequate description requirement is met. See, e.g., [*Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563, 19 USPQ2d 1111, 1116 (Fed.Cir., 1991)]; *Martin v. Johnson*, 454 F.2d 746, 751, 172 USPQ 391, 395 (CCPA, 1972)(stating "the description need not be in *ipsis verbis* [i.e., "in the same words"] to be sufficient").

See also MPEP § 1302.01, where it states:

> It should be noted, however, that exact terms need not be used *in haec verba* to satisfy the written description requirement of the first paragraph of 35 U.S.C. § 112. *Eiselstein v. Frank*, 52 F.3d 1035, 1038, 34 USPQ2d 1467, 1470 (Fed.Cir., 1995); *In re Wertheim*, 541 F.2d 257, 265, 191 USPQ 90, 98 (CCPA, 1976). See also 37 C.F.R. § 1.121(e), which merely requires *substantial* correspondence between the language of the claims and the language of the specification.

For all of these reasons, reconsideration and withdrawal of this rejection are respectfully urged.

Claims 1, 3-11, 13-26 and 31-35 have been rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification at the time the application was filed. The examiner states that the recitation of the claims that the biologically active material is not covalently modified inserts unsupported new matter, and therefore the claims do not comply with the written description requirement.

In order to obviate this rejection, all of the claims have now been amended to remove the language that the examiner states is new matter. Thus, "covalently modified or" has been removed from all of the claims in which it previously appeared. Accordingly, this rejection has now been obviated.

Claims 28 and 30 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. The examiner states that claim 28 recites the limitation "said incubating step", and claim 30 recites the limitation "said incorporating step". However, there is insufficient antecedent basis for these limitations, as neither claim 27 nor 29 recite a "step".

Claims 27 and 29 have now been amended to insert the word "step", thus obviating this rejection.

The examiner states that the rejection of claims 1, 5, 6, 11, 17, 18, 25-27 and 29-30 under 35 U.S.C. § 102(b), as being anticipated by Neurath, has been withdrawn due to the insertion of the recitation that the molecule is not covalently modified. However, the examiner points out that these amendments have resulted in a new ground of rejection under 35 U.S.C. § 112 for new matter.

In view of the fact that the language about the molecule not being covalently modified has now been removed from the claims in order to obviate the new matter rejection, applicant will assume that the 35 U.S.C. § 102 rejection, as set forth in the previous official action of May 6, 2003, is again applicable. In order to obviate this rejection, despite the removal of the provision that the molecule is not covalently modified, the present claims have now been amended so as to insert subject matter that the examiner had previously conceded was not subject to any prior art rejection. Thus, for example, in the official action of May 6, 2003, the only art rejection was that under 35 U.S.C. § 102(b) in view of Neurath. However, claims 3, 13, and 20 were not subject to that rejection. Accordingly, claim 1 has now been amended so as to appear as claim 3 rewritten in independent form. As claim 3 was never subject to an anticipation rejection over Neurath prior to the time that the allegedly new matter was added, it is clear that

the language about the molecule not being covalently modified is not necessary in order for newly amended claim 1 to be free of the prior art. Similarly, claim 11 has been amended to appear as previously appearing claim 13 in independent form. As claim 13 was previously indicated to be free of the art rejection, presently amended claim 11 must also be free of the art rejection, notwithstanding the deletion of the limitation that the molecule is not covalently modified. Similarly, claim 17 has been amended to appear as claim 20 rewritten in independent form. As claim 20 was previously indicated as not being subject to the 35 U.S.C. § 102 rejection, newly amended claim 17 must now be considered to be free of the prior art, notwithstanding the deletion of the requirement that the molecule not be covalently modified, as this limitation was not in the claim at the time of the rejection of May 6, 2003, which did not include claim 20.

While claim 31 was not in the case at the time of the official action of May 6, 2003, it should be allowable because of the requirement that the CTL response be enhanced.

The rejection of claims 27, 29 and 30 as being anticipated by Neurath has been maintained. The examiner states that claims 27, 29 and 30 have not been amended to recite the limitation that the biologically active molecule is not covalently modified.

It is noted that claim 28 has not been subject to this rejection. Accordingly, claim 27 has now been amended to appear as claim 28 rewritten in independent form. As claims 29 and 30 ultimately depend from claim 27, these claims should now also be free of the prior art for the same reason that the examiner had indicated claim 28 to be free of the prior art.

For all of these reasons, reconsideration and withdrawal of all rejections under 35 U.S.C. § 102 over Neurath, previous or present, are respectfully urged.

It is urged that the present amendment clearly places the case in condition for allowance, and does not require any substantial additional consideration or search. The art rejections have been overcome by accepting the allowability of claims that had never been subject to an art rejection. The enablement rejection has been overcome by an minor amendment that is also substantially in accordance with the suggestion of the examiner. Accordingly, it submitted that all of the claims now present in the case fully define over the references of record and fully comply with 35 U.S.C. § 112. Reconsideration and allowance are therefore earnestly solicited.

Respectfully submitted,

BROWDY AND NEIMARK, P.L.L.C.
Attorneys for Applicant(s)

By _____
Roger L. Browdy
Registration No. 25,618

RLB:jab
Telephone No.: (202) 628-5197
Facsimile No.: (202) 737-3528
G:\BN\C\cohn\Reimann1\Pto\amd AF05-27-04.doc